

ABSTRACT OF THE DISCLOSURE

A method and apparatus accommodate interaction phenomenon in a data-flow-based simulation of a system of elements, by establishing meta-modules to simulate system elements and by establishing world modules associated with interaction phenomena. World modules are associated with proxy modules from a group of meta-modules associated with one of the interaction phenomenon. The world modules include a communication world, a sensor world, a mobility world, and a contact world. World modules can be further associated with other world modules if necessary. Interaction phenomenon are simulated in corresponding world modules by accessing member functions in the associated group of proxy modules. Proxy modules can be dynamically allocated at a desired point in the simulation to accommodate the addition of elements in the system of elements such as a system of robots, a system of communication terminals, or a system of vehicles, being simulated.